(Mem. Torr. Club, 5), Britton and Brown's Illustrated Flora, Rhodora (1 : 68), Heller's Catalogue, and other publications.

In the Kew Index, Walter's *Anonymos capitat.* is correctly referred to *Burmannia*, and the authorship of the combination *Burmannia capitata* is credited to Martius.

The correct synonymy of these two species is then as follows :

BURMANNIA CAPITATA (Walt.) Mart. Nov. Gen. et Sp. Pl. Bras. 1 : 12. 1824.

Anonymos capitat. Walt. Fl. Car. 69. 1788.
Vogelia capitata Gmel. Syst. 2 : 107. 1791.
Tripterella capitata Mx. Fl. Bor. Am. 1 : 19. *pl. 3.* 1803.

GYROTHECA TINCTORIA (Walt.) Sal. Trans. Hort. Soc. 1 : 327. 1812.

Anonymos tinctori. Walt. Fl. Car. 68. 1788.
Dilatris tinctoria Pursh, Fl. Am. Sept. 30. 1814.
Lachnanthes tinctoria Ell. Bot. S. C. & Ga. 1 : 47. 1816.
Gyrotheca capitata Morong, Bull. Torr. Club, 20 : 472. 1893.

Several other synonyms for the latter are given in Dr. Morong's paper.

COLUMBIA UNIVERSITY.

TRANSPIRATION OF RUST-INFESTED RUBUS

BY FREDERICK H. BLODGETT

On May 23d last, two branches of *Rubus* sp. were cut from adjacent plants. The branches were as nearly alike in size and number of leaves as possible, but one was healthy, the other badly rusted (with *Gymnoconia interstitialis*). Fifteen minutes after cutting they were placed in water. Each had wilted somewhat, especially in the new growth of which there were several inches on each branch. The rusted branch was wilted considerably more than the healthy one. The healthy specimen revived when placed in water, the rusted one continued to wilt, the basal leaves only showing any tendency to recover.

On the 24th the test was repeated in a more careful manner. The two branches bore the same relation to one another as before, but they were placed in water immediately upon cutting.

The leaf surface was slightly greater in the healthy specimen, as the normal leaves were larger than the rusted, but the number was nearly equal in the two specimens. Large test-tubes were used, in which the branches were left tightly corked over night. When examined on the morning of the 25th the healthy branch was not wilted, the rusted one was considerably so. The rusted specimen evaporated 42 cc. while the healthy specimen evaporated 23 cc. of water under parallel conditions.

Thus the branch with the rusted leaves absorbed nearly twice as much water as the healthy branch, and yet failed to remain unwilted. The rust covered the lower surface of nearly all of the leaflets almost completely, and the extra demand for water thus imposed upon the plant was equivalent to doubling the leaf surface, as indicated by the volume of water transpired.

NEWS ITEMS

Professor A. S. Hitchcock, of the Kansas Agricultural College, has been appointed Assistant Agrostologist of the Department of Agriculture in the place of Thomas A. Williams, deceased.

A revision of the Crotons of the United States by A. M. Ferguson has recently been issued as a separate from the Twelfth Annual Report of the Missouri Botanical Garden. Twenty-six species and several varieties are described, most of which are also illustrated.

The Yale Summer School of Forestry will hold its sessions this year at Grey Towers, the estate of Mr. James W. Pinchot, near the village of Milford, Pike Co., Pennsylvania. The instruction will be under the charge of Professor Henry S. Graves and Professor James W. Toumey.

Mr. Percy Wilson, Museum Aid at the New York Botanical Garden, has been sent with the Solar Eclipse Expedition, under the direction of Professor David P. Todd, of Amherst College, to the Dutch East Indies, for the purpose of securing museum specimens, living plants and seeds. He sailed on March 2, by way of the Suez Canal, for Singapore.